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(54) Title: METHODS AND COMPOSITIONS FOR TREATING TISSUE DEFECTS USING PULSED ELECTROMAGNETIC FIELD STIMULUS

(57) Abstract: Methods of enhancing cell proliferation in tissue cultures and at the site of tissue defects in human or other animal subjects, comprising the steps of: (a) culturing a living tissue in a medium to form a tissue culture; (b) subjecting said tissue culture to an electromagnetic field; (c) extracting said medium from said tissue culture; and (d) administering said medium to the site of said tissue defect. Preferably, the tissue culture comprises endothelial cells. The present invention also provides compositions for the treatment of tissue defects in a human or other animal subject, comprising a safe and effective amount of a medium produced by electromagnetic stimulation of a tissue culture. Preferably, the compositions comprise a pharmaceutically acceptable carrier, such as hyaluronic acid, gelatin, collagen, cellulose ether, and osteoconductive carriers.